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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/470,163	12/22/1999	DAVID M. PUTZOLU	81674-264193	5845

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EXAMINER
NGUYEN, QUANG N

ART UNIT	PAPER NUMBER
2141	18

DATE MAILED: 09/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PRL

Office Action Summary	Application No. 09/470,163	Applicant(s) PUTZOLU ET AL.	
	Examiner Quang N. Nguyen	Art Unit 2141	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 August 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12/22/1999* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/15/2003 has been entered.

Claims 1-21 are presented for examination. Claims 1, 8 and 17 have been amended.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-3 and 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen et al. (US 6,434,618), herein after referred as Cohen, and in view of Ramaswamy et al. (US 6,424,621), herein after referred as Ramaswamy.

4. As to claim 1, Cohen teaches a computer system comprising:

a forwarding element (router) adapted to perform data forwarding in a computer network;

an interconnecting element (network interface) operatively connecting the forwarding element to the control element; and

a forwarding element plugin (a programmable gateway 400 with the dispatcher process 402) integrated with the control element for receiving the standardized data set from the control element, translating the standardized data set into a specialized data set, and transmitting the specialized data set to the forwarding element to configure the forwarding element (i.e., programmable network element/gateway receives, manipulates, processes and forwards packet traffic through the packet filter for output onto the network through network interfaces), wherein the forwarding element utilizes the specialized data set to configure the forwarding element for performing data forwarding in the computer network to facilitate integration of uniform standardized data set with proprietary specialized data set (Cohen, Figs, 1-4 and respective portions of the specification, C2: L5-36, C3: L30-67, C4: L1-65, C11: L25-67, C12, and C13: L1-34).

However, Cohen does not explicitly teach a control element adapted to perform network signaling and control in the computer network.

In the related art, Ramaswamy teaches a computer system comprising a control element (control processor 42) adapted to perform network signaling and control (i.e., performs complex calculations on the raw system load information and defines an optimum traffic load distribution) in the computer network (Ramaswamy, Figs 1-7 and

respective portions of the specification, C3: L9-50, C6: L25-48, C7: L1-24, and C10: L20-36).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of Cohen and Ramaswamy to include a control element adapted to perform network signaling and control in the computer network since such methods/techniques were conventionally employed in transferring data packets between computer networks in which a software interface is defined between the switching module and the operating system to process the packet for transferring/routing the data packet to its intended destination.

5. As to claim 2, Cohen-Ramaswamy teaches the computer system as in claim 1, further including an opaque forwarding element plugin (the dispatcher process 402 of the programmable gateway 400) for receiving the standardized data set from the control element and transmitting the standardized data set to the forwarding element plugin, and for receiving the specialized data set from the forwarding element plugin and transmitting the specialized data set to the forwarding element (Cohen, Fig. 4 and respective portions of the specification, C4: L14-38, C5: L40-67 and C6: L1-27).

6. As to claim 3, Cohen-Ramaswamy teaches the computer system as in claim 1, but does not explicitly teach the specialized data set is a binary large object. However, as generally known in the art, a Binary Large Object (BLOB) is a variable-length data type that is commonly used to store complex data, such as graphics images, video data,

audio data, and other non-textual data. Therefore, Cohen-Ramaswamy inherently teaches the specialized data set is a binary large object (Cohen, C3: L30-67 and C4: L1-6).

7. As to claim 6, Cohen-Ramaswamy teaches the computer system as in claim 1, wherein the specialized data set is encrypted before transmission to the forwarding element, and the encrypted specialized data set is decrypted at the forwarding element (Cohen, C3: L49-52 and C4: L57-62).

8. As to claim 7, Cohen-Ramaswamy teaches the computer system as in claim 1, wherein the forwarding element plugin is a dynamic link library (Cohen, C6: L28-50).

9. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen, in view of Ramaswamy, and further in view of Beighe et al. (US 5,742,607), herein after referred as Beighe.

10. As to claims 4-5, Cohen-Ramaswamy teaches the computer system as in claim 1, but does not explicitly teach the forwarding element further includes a decapsulator that receives the specialized data set and decapsulates the specialized data set into data readable by a device-specific forwarding element interface of the forwarding element to configure the forwarding element.

In the related art, Beighe teaches a computer system comprising a central processor, a forward channel interface, a return channel interface, and a main memory, each being coupled to a bus, wherein the forwarding element further includes a decapsulator that receives the specialized data set and decapsulates the specialized data set into data readable by a device-specific forwarding element interface of the forwarding element to configure the forwarding element (Beighe, Fig. 3 and respective portions of the specification, C2: L24-48 and C8: L10-30).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of Cohen-Ramaswamy and Beighe to include a decapsulator that receives the specialized data set and decapsulates the specialized data set into data readable by a device-specific forwarding element interface of the forwarding element to configure the forwarding element since such methods/techniques were conventionally employed in packet manipulation to control two way communication in network management system.

11. Claims 8-16 are corresponding method claims of claims 1-7; therefore, they are rejected under the same rationale.

12. Claims 17-21 are corresponding article claims of claims 1-7; therefore, they are rejected under the same rationale.

Response to Arguments

13. In the remarks, applicant argued in substance that

(**A**) Prior Art does not disclose "a forwarding element plugin integrated with the control element for receiving the uniform standardized data set from the control element, translating the uniform standardized data set into proprietary specialized data set to the forwarding element, and transmitting the proprietary specialized data set to the forwarding element to configure the forwarding element".

As to point (**A**), before addressing the argument, it is noted that the language of the limitation cited in the quotation can be given broad and reasonable interpreted in light of specification as a standardized data set is received, translated into a specialized data set and forwarded to a forwarding element. **Cohen** (US 6,434,618) teaches a programmable gateway (i.e., a forwarding element plugin) that receives, processes, manipulates and forwards packet traffic through the packet filter for output onto the network through network interfaces (i.e., adapted to perform data receiving, translating and forwarding in a computer network) wherein such packet manipulation can include network address translation, TCP sequence number translation, firewall protection, encrypting or decrypting packet payload to ensure secure communication between LANs, and web dispatching for load balancing and fault tolerance purposes (**Cohen**, C3: L36-67, C4: L1-29, C10: L56-67 and C11: L1-24). Hence, **Cohen** does teach a

forwarding element plugin integrated with the control element for receiving the uniform standardized data set from the control element, translating the uniform standardized data set into proprietary specialized data set to the forwarding element, and transmitting the proprietary specialized data set to the forwarding element to configure the forwarding element.

(**B**) Prior Art does not disclose "a control element adapted to perform network signaling and control in the computer network".

As to point (**B**), **Ramaswamy** (US 6,424,621) teaches a data packet switching system 10 comprising the control processor 42 (i.e., a control element) that handles administrative and configuration functions for the load balancing and packet switching system, wherein the control processor is adapted to receive raw load status data and generate load distribution configuration data therefrom (i.e., generate a standardized data set for configuring the forwarding element) which is used by the switching processors 44 to supply data packets to the transmit queues of each of one of the network interfaces 37, so that data packets can then be routed (i.e., forwarded) to any computer network coupled to the load balancing and packet switching system 10 (**Ramaswamy**, C3: L14-16, C6: L34-67 and C7: L1-24). Hence, **Ramaswamy** does teach a control element adapted to perform network signaling and control in the computer network.

(**C**) There is no suggestion or motivation to modify either of the references or to combine the references.

As to point (**C**), it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of **Cohen** and **Ramaswamy** to include a control element adapted to perform network signaling and control in the computer network since such methods/techniques were conventionally employed in transferring data packets between computer networks in which a software interface is defined between the switching module and the operating system to process the packet for transferring/routing the data packet to its intended destination as in the programmable network element/gateway (Cohen, C2: L5-59).

Examiner believes that the motivation was given above to combine **Cohen** and **Ramaswamy** is sufficient. In addition, Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

Moreover, the test for obviousness is not whether the features of one reference may be bodily incorporated into the other reference to produce the claimed subject matter but simply what the references make obvious to one of ordinary skill in the art.

14. Applicant's arguments and request for consideration filed on 08/15/2003 have been fully considered but they are not persuasive.

15. A shortened statutory period for reply to this action is set to expire THREE (3) months from the mailing date of this communication. See 37 CFR 1.134.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang N. Nguyen whose telephone number is (703) 305-8190.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's primary, Le H. Luu, can be reached at (703) 305-9650. The fax phone numbers for the organization is (703) 746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800/4700.

Quang N. Nguyen

LE HIEN LUU
PRIMARY EXAMINER